

Claims

Claim 1. In a sink having a sink drain for the discharge of debris, said sink drain including:

a trap pipe with a first slip joint nut threadly engaged on a debris receiving end;

a drain line pipe having an annular drain line flow space joined to said sink drain, said drain line pipe having a waste discharge end;

a washer having an inside diameter substantially corresponding to said reduced diameter of said waste discharge end, said washer being pressed by the threaded engagement of said first slip joint nut with said trap pipe for forming a liquid tight seal;

a side outlet pipe extending laterally from said drain line pipe, said side outlet pipe having a side outlet flow space extending from opposed sides of said tubular drain line flow space;

a strainer having an elongated strainer body containing an array of apertures traversing said tubular drain flow space and said side outlet flow space for extracting and retaining debris occurring in said drain line flow space upstream of said side outlet pipe, said elongated strainer body having a debris retention floor bounded by laterally spaced upstanding strainer side walls interconnected by an annular upstanding strainer end wall, a terminal end closure plate joined with said debris retention floor and said laterally spaced upstanding strainer side walls, support rails extending from said upstanding strainer side walls, said elongated strainer body having a length sufficient to form an abutting engagement by said annular upstanding strainer end wall with an internal annular wall surface of said drain line flow space at the junction between said drain line flow space and said side outlet flow space, the aggregate area

defined by number and diameter of said array of apertures exceed the of the transverse cross sectional areas of said drain line flow space and said a side outlet flow space;

a second slip joint nut threadly engaged with said side outlet pipe to press said terminal end closure plate against said side outlet pipe for forming a fluid tight seal; and

spaced apart guides in said drain line flow space and said side outlet flow space for engaging said strainer support rails to resist movement of said strainer in said drain line flow space and said side outlet.

2. The sink drain according to claim 1 wherein said sink drain line further includes a sink tail piece for conducting a waste discharge to said drain line pipe, and a third slip joint nut threadly engaged with said drain line pipe for forming a fluid tight seal with said sink tail piece.

3. The sink drain according to claim 1 wherein said annular drain line pipe extends along opposed sides to opposed linear sides of said side outlet pipe.

4. The sink drain according to claim 1 wherein said side outlet pipe is tubular having a central outlet axis perpendicular to and intersecting a central longitudinal axis of said drain line flow space.

5. The sink drain according to claim 4 wherein said elongated strainer body is defined by a hemispherical cross sectional configuration forming a concave debris retention area containing said array of apertures and wherein said upstanding strainer side walls and said annular upstanding strainer end wall engage said side outlet pipe within a plane of support for said strainer remote to said central outlet axis sufficiently upstream along said central longitudinal axis of said drain line flow space to prevent inverted support of said strainer in said

side outlet pipe.

6. The sink drain according to claim 4 further including a support rail protruding from said annular upstanding strainer end wall end wall to engage between said guides for resisting torque acting on said strainer during placement of said second slip joint nut.

7. The sink drain according to claim 5 wherein said strainer body is suspended on said laterally spaced support rails at a position to space said hemispherical strainer body from said side outlet pipe and form a flow space there between.

8. The sink drain according to claim 1 wherein said upstanding strainer side walls are parallel residing along parallel sides of said side outlet flow space.

9. The sink drain according to claim 1 further including a handle extending from said a terminal end closure plate at a side thereof opposite said elongated strainer body.

10. The sink drain according to claim 1 further including a seal between said terminal end closure plate and said side outlet pipe.

11. The sink drain according to claim 1 wherein said apertures are sufficient in number and diameter to form strainer flow spaces approximating four times said drain line flow space.

12. The sink drain according to claim 1 wherein said trap pipe includes threads encircling said debris receiving end for engaging said first slip joint nut.

13. The sink drain according to claim 1 wherein said debris retention floor is planer between said laterally spaced upstanding side walls to space said elongated strainer body from said side outlet pipe for forming a flow space there between.

14. The sink drain according to claim 1 wherein said trap pipe comprises a P trap.

15. The sink drain according to claim 1 wherein said trap pipe comprises a J trap.

16. The sink drain according to claim 1 wherein said trap pipe comprises a S trap.

17. The sink drain according to claim 1 wherein said side outlet pipe and said drain line pipe are integral and comprises a Tee.

18. The sink drain according to claim 1 further including an insert structure containing said spaced apart guides for placement in said side outlet flow space to engage said strainer support rails.

19. The sink drain according to claim 18 wherein said insert structure includes a flange having a central opening intercepted by opposed strainer support grooves in side rails for slidably engaging said support rails of said strainer.